

Title (en)

Polarimetric directional field sensor.

Title (de)

Gerichteter, polarimetrischer Feldsensor.

Title (fr)

Capteur de champs polarmétrique directionnel.

Publication

**EP 0458255 A2 19911127 (EN)**

Application

**EP 91108161 A 19910521**

Priority

IT 2043390 A 19900525

Abstract (en)

A polarimetric directional field sensor comprises an emitter and receiver (1) of measurement signals, connected by optical fibres (2, 2a, 2b) to a portable probe (3). The probe (3) comprises an optical element (11, 13) sensitive to the field to be measured and means (9, 20) for polarizing the measurement signal. The optically sensitive element (11,13) is in the form of a birefringent crystal having a crystalline structure which provides at least one plane in which the induced birefringence is modified by a single component of the field to be measured. The crystal is cut and oriented in the probe so that the direction of propagation of the optical measurement signal inside the crystal is normal to this plane, the polarizing means (9, 20) being oriented at 45 DEG to the orthogonal axes in which the crystal's refractive indices are modified by the desired component of the field.

<IMAGE>

IPC 1-7

**G01R 1/067**; **G01R 15/07**; **G01R 29/08**; **G01R 29/12**

IPC 8 full level

**G01R 1/07** (2006.01); **G01R 29/08** (2006.01); **G01R 29/12** (2006.01)

CPC (source: EP US)

**G01R 1/071** (2013.01 - EP US); **G01R 29/0885** (2013.01 - EP US); **G01R 29/12** (2013.01 - EP US)

Cited by

DE102004026945A1; CN1052070C; CN1052071C; EP0697599A3; EP0715190A1; GB2345549A; CN1052072C; FR2902523A1; WO2007144547A1; WO2014081326A3; US8264685B2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

**EP 91108161 A 19910521**; BR 9102265 A 19910527; CA 2043255 A 19910524; DE 69109535 T 19910521; IT 2043390 A 19900525; US 70301891 A 19910520